



Background

- 9/11 has changed water system security requirements
- Continued training for intentional incidents is critical

Instructor Notes:

Explain to participants that before 9/11, most utilities' security was aimed at minimizing vandalism and was correspondingly low-tech. Now, security is aimed at deterring an organized attack carried out against a water utility. This requires better hardware and software at utilities as well as a change in "business as usual" practices.

Background (con't.)



- **First responders to an incident include:**
 - **Emergency Management**
 - **Law Enforcement**
 - **Public Health**
 - **Clinical Care**
 - **Public Safety**
- **HSPD 8 added Public Works**

Instructor Notes:

Explain that Homeland Security Presidential Directive (HSPD) 8 defines “first responders” as those individuals who in the early stages of an incident are responsible for the protection and preservation of life, property, evidence, and the environment, including emergency response providers as defined in section 2 of the Homeland Security Act of 2002 (6 U.S.C. 101), as well as emergency management, public health, clinical care, **public works**, and other skilled support personnel (such as equipment operators) that provide immediate support services during prevention, response, and recovery operations.

Since water utilities were not considered to be first responders in the past, it will take effort to instill a constant awareness of security and emergency response procedures within a water utility’s culture.

A man in a dark suit and tie stands in front of a large screen. The screen displays a presentation slide with a blue header and a light blue body. The slide title is "What is an Exercise?". The slide content defines an exercise as a focused practice activity that places participants in a simulated situation and requires them to function in the capacity they would be expected to in a real event. The man is holding a yellow folder or paper.

What is an Exercise?

An exercise is a focused practice activity that:

- **places the participants in a simulated situation; and**
- **requires them to function in the capacity that would be expected of them in a real event.**

Instructor Notes:

Basically, an exercise promotes preparedness by testing policies and plans and training personnel.



Why Exercise?

- To evaluate a water utility's ability to execute one or more portions of its Emergency Response Plan (ERP)
- To identify and correct problems with emergency response communications and procedures prior to a real event

Instructor Notes:

There are two main benefits of an exercise program:

1. Individual training that allows people to practice their roles and gain experience in those roles.
2. System improvement that allows an organization to improve its system for managing an emergency.

You must evaluate the exercise upon completion and act upon the recommendations that arise from that evaluation process. The focus of an exercise should always be on locating and eliminating problems before an actual emergency occurs.

Why Exercise? (cont'd.)

- **Successful responses to past emergencies have shown that exercising is an effective means to prepare**



- **Case Study: Sioux City, IA plane crash**

- UA 232 loses one engine and all hydraulics
- Crash lands at a small, local airport
- More than half the people on board survive



Instructor Notes:

In 1989, United Airlines Flight 232, a DC-10 bound from Denver to Chicago, crash-landed at the Sioux City, Iowa airport after losing power in one engine and the aircraft hydraulics. More than half the people on board survived the crash. Their survival was based mainly on three main factors:

1. The response of the flight crew before the crash landing.
2. Trained rescue units waiting on the ground.
3. Centralized communications among all response agencies

In Sioux City, a Disaster Services Center had been established before the crash. Representatives from 40 local agencies met regularly and planned exercises. Just two years before the crash, the community conducted a full-scale exercise based on a commercial plane crash. This exercise revealed several problems including confusion in communications and inadequate numbers of ambulances and other equipment at the scene.

The day after the crash, the Assistant Fire Chief said “We made mistakes during the exercise. The mistakes we made then did not materialize yesterday.”

Why Exercise (cont'd.)



- **Passenger survival attributed to:**
 - Response of flight crew
 - Trained rescue units
 - Centralized communications
- **Sioux City Disaster Services Center had been established**
- **Center conducted a full-scale plane crash exercise two years prior**

Instructor Notes:

Their survival was based mainly on three main factors:

1. The response of the flight crew before the crash landing.
2. Trained rescue units waiting on the ground.
3. Centralized communications among all response agencies

In Sioux City, a Disaster Services Center had been established before the crash. Representatives from 40 local agencies met regularly and planned exercises. Just two years before the crash, the community conducted a full-scale exercise based on a commercial plane crash. This exercise revealed several problems including confusion in communications and inadequate numbers of ambulances and other equipment at the scene.

The day after the crash, the Assistant Fire Chief said “We made mistakes during the exercise. The mistakes we made then did not materialize yesterday.”

Emphasize with the participants that preparation and training will provide huge dividends during an actual incident.

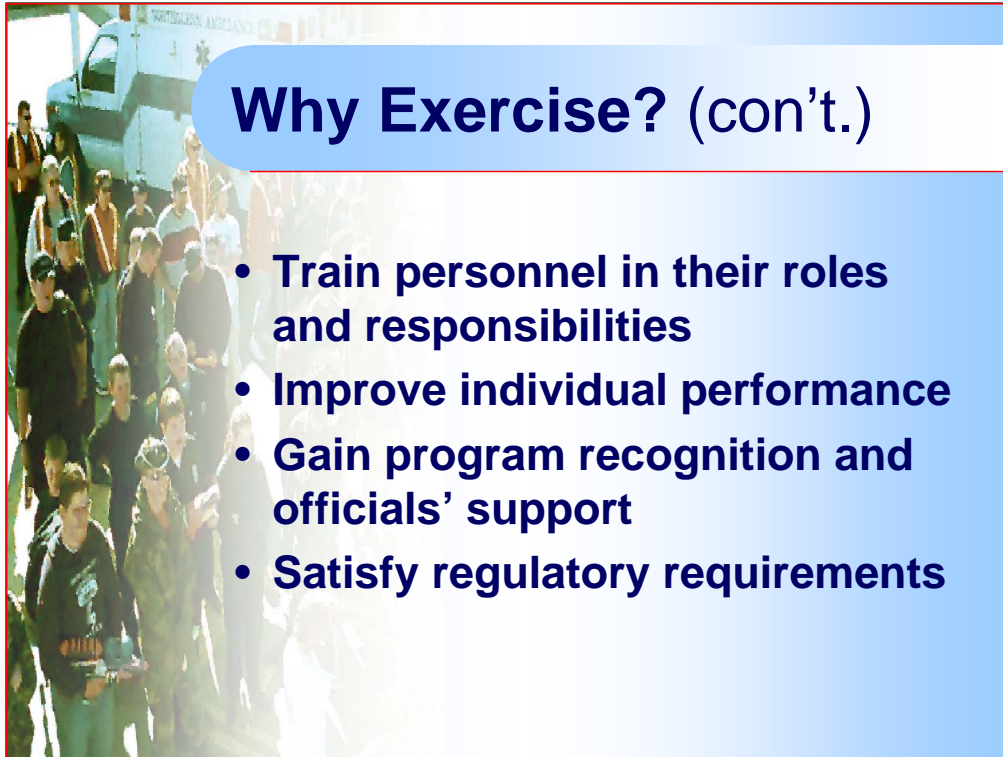
Why Exercise? (cont'd.)

- Test and evaluate policies, plans, and procedures
- Reveal planning weaknesses
- Reveal resource gaps
- Improve coordination and communication
- Clarify roles and responsibilities



Instructor Notes:

The purpose of an exercise program is to test emergency response policies and procedures before an event occurs to determine the shortcomings and gaps in those policies and procedures. Once identified, these shortcomings and gaps must be corrected prior to the next exercise or before an event occurs. Since it is unknown when an event will occur, corrections to policies and procedures must be made in a timely manner upon exercise completion.



Why Exercise? (con't.)

- Train personnel in their roles and responsibilities
- Improve individual performance
- Gain program recognition and officials' support
- Satisfy regulatory requirements

Instructor Notes:

Instruct the participants that they must evaluate the exercise upon completion and act upon the recommendations that arise from that evaluation process. The focus of an exercise should always be on locating and eliminating problems before an actual emergency occurs.

It may be relevant to point out to a water utility audience that by hosting exercises and participating in exercises conducted by others that their programs will begin to receive official recognition and support from the established local first responder community. This recognition may make it easier for them to begin to receive local preparedness funds that may have typically been allotted to more “traditional” first response agencies such as police and fire.

Exercise Value



- Allows for training in those functions common to all emergencies
- One of the best ways to ensure that all members of a response team are operating from the same page
- Develops/strengthens relationships between the response team

Instructor Notes:

Remember, the value in an exercise lies in the improvements in emergency response actions that result from conducting the exercise.

Types of Exercises



- **Orientation Seminar**
- **Drills**
- **Tabletop Exercise**
- **Functional Exercise**
- **Full-Scale Exercise**

Instructor Notes:

In emergency preparedness, an emphasis should be placed on a comprehensive exercise program, made up of progressively complex exercises that build on the previous one, until the exercises are as close to reality as possible.

The exercises listed on this slide escalate in their level of complexity and cost, with the orientation seminar being the simplest and least costly and the full-scale exercise being the most complex and expensive to conduct. All have value in terms of better preparing an individual or organization for an emergency response.

Exercise Definitions



- **Orientation Seminar**

- An overview or introduction designed to familiarize participants with roles, plans, procedures, or equipment.



- **Drills**

- A coordinated, supervised activity normally used to test a single specific operation or function.

Instructor Notes:

•Orientation seminars can also be used to resolve questions of coordination and assignment of responsibilities. They are lead by a facilitator, should be about 1-2 hours in length, and can usually be held in a conference room.

•Drills are used to practice and perfect one small part of a response plan to help prepare for a larger, more complex exercise. Coordination with other agencies is not necessary. The drill makes it possible to tightly focus on a potential problem area. A manager or supervisor will need to lead the drill, it will take about ½ an hour to 2 hours to run, and can be conducted in a facility, in the field, or at an EOC or other operating center.

Exercise Definitions (con't.)



- **Tabletop Exercise**

- A facilitated analysis of an emergency situation in an informal, stress-free environment.



- **Functional Exercise**

- A fully simulated interactive exercise that tests the capability of an organization to respond to a simulated event.

Instructor Notes:

Tabletop exercises are designed to elicit constructive discussion as participants examine and resolve problems based on existing operational plans and identify where those plans need to be refined. A problem statement detailing an event (or “scenario”) is usually read to set the stage and get the discussion going. As the discussion progresses, simulated messages or “injects” can be introduced to represent changes as the scenario progresses. Tabletop exercises are lead by a facilitator and can involve many people and many organizations. A large conference room is required. The tabletop exercise can last from 1 to 4 hours or longer, depending on how long it takes participants to arrive at in-depth decisions. Time pressure is not part of a tabletop exercise.

A functional exercise tests multiple functions of an organization’s operational plan. It is a coordinated response to a scenario in a time-pressured, realistic simulation. Functional exercises require a controller, participants, simulators, and evaluators. Ideally the exercises are held in the facility where people would gather during an emergency, but they can be held in other facilities as well. Players and simulators are often seated in separate areas or rooms. Realism is achieved through the use of maps, telephones, radios, televisions, etc.

Exercise Definitions (con't.)

- **Full-Scale Exercise**
 - Simulates a real event as closely as possible



Instructor Notes:

A full-scale exercise evaluates the operational capability of emergency management systems in a highly stressful environment that simulates actual response conditions. It requires the mobilization and actual movement of emergency personnel, equipment, and resources. It involves several organizations and activates the EOC or other operating center.

Example: The “Topoff 2” exercise in Chicago in 2003 was a 5-day full-scale exercise centered on a terrorist weapons of mass destruction (WMD) attack involving the release of a biological agent.